INPLASY PROTOCOL

To cite: Tsiogka et al. The impact of treatment with IL-17/IL-23 inhibitors on subclinical atherosclerosis in patients with plaque psoriasis and/or psoriatic arthritis: a systematic review. Inplasy protocol 2022120102. doi: 10.37766/inplasy2022.12.0102

Received: 26 December 2022

Published: 26 December 2022

Corresponding author:
Aikaterini Tsiogka

a.tsiogka@yahoo.com

Author Affiliation:
First Department of Dermatology-Venereology, Faculty of Medicine, National and Kapodistrian University of Athens, "A. Sygros" Hospital for Skin and Venereal Diseases, Athens, Greece.

Support: **No funding.**

Review Stage at time of this submission: **Completed but not published.**

Conflicts of interest:
None declared.

The impact of treatment with IL-17/IL-23 inhibitors on subclinical atherosclerosis in patients with plaque psoriasis and/or psoriatic arthritis: a systematic review

Tsiogka, A[1]; Gregoriou, S[2]; Stratigos, A[3]; Soulaidopoulos, S[4]; Rompoti, N[5]; Panagaki, P[6]; Papoutsaki, M[7]; Kostakis, P[8]; Kontochristopoulos, G[9]; Tsioufis, K[10]; Campanati, A[11]; Offidani, A[12]; Vlachopoulos, C[13]; Rigopoulos, D[14].

Review question / Objective: **To provide a systematic review of the literature on the impact of treatment with biologics targeting the IL-23/Th17 axis on subclinical atherosclerosis in patients with plaque psoriasis and/or psoriatic arthritis.**
Eligibility criteria: **All randomized controlled trials (RCTs) and prospective cohort studies assessing the effect of IL-17 and IL-23 inhibitors on subclinical atherosclerosis in patients with psoriasis from inception to August 2022. Subclinical atherosclerosis could be assessed by any markers or diagnostic examinations, addressed so far in the literature. Non-human studies and articles reporting the effect of IL-17/IL-23 inhibitors on cardiovascular risk factors (e.g., lipid metabolism, adipocytes etc.) were excluded. Studies reporting the effect of the IL-12/23 inhibitor, ustekinumab, on subclinical atherosclerosis were excluded, as this agent blocks the common p40 subunit of IL-12 and IL-23 and, thus, inhibits not only the IL-23-dependent Th17 but also the IL-12-dependent Th1 immune response.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 26 December 2022 and was last updated on 26 December 2022 (registration number INPLASY2022120102).

INTRODUCTION

Review question / Objective: **To provide a systematic review of the literature on the impact of treatment with biologics targeting the IL-23/Th17 axis on subclinical atherosclerosis in patients with plaque psoriasis and/or psoriatic arthritis.**

Condition being studied: atherosclerosis and cardiovascular disease in the context of psoriasis vulgaris and/or psoriatic arthritis.

METHODS

Participant or population: Patients with psoriasis vulgaris and/or psoriatic arhtritis.

Intervention: Patients with psoriasis vulgaris and/or psoriatic arthritis receiving biologic therapy with IL-17 or IL-23 inhibitors.

Comparator: Patients with psoriasis vulgaris and/or psoriatic arthritis receiving non-biologic therapy or biologic therapy other than IL-17 or IL-23 inhibitors.

Study designs to be included: Randomized controlled trials and prospective cohort studies.

Eligibility criteria: All randomized controlled trials (RCTs) and prospective cohort studies assessing the effect of IL-17 and IL-23 inhibitors on subclinical atherosclerosis in patients with psoriasis from inception to August 2022. Subclinical atherosclerosis could be assessed by any markers or diagnostic examinations, addressed so far in the literature. Non-human studies and articles reporting the effect of IL-17/IL-23 inhibitors on cardiovascular risk factors (e.g., lipid metabolism, adipocytes etc.) were excluded. Studies reporting the effect of the IL-12/23 inhibitor, ustekinumab, on subclinical atherosclerosis were excluded, as this agent blocks the common p40 subunit of IL-12 and IL-23 and, thus, inhibits not only the IL-23-dependent Th17 but also the IL-12-dependent Th1 immune response.

Information sources: MEDLINE electronic database searched systematically via PubMed Screening of the reference lists of the included articles in order to detect any relevant studies, that were not identified during initial search.

Main outcome(s): The impact of treatment with biologics targeting the IL-23/Th17 axis on subclinical atherosclerosis in patients with plaque psoriasis and/or PsA.

Quality assessment / Risk of bias analysis: n/a.

Strategy of data synthesis: characteristics and outcomes of each included study will be discussed in the text and summarized in a table.

Subgroup analysis: n/a.

Sensitivity analysis: n/a.

Country(ies) involved: Greece; Italy.

Keywords: Psoriasis; biologics; IL-23/Th17 axis; cardiovascular; atherosclerosis; arterial stiffness.

Contributions of each author:

Author 1 - Aikaterini Tsiogka.
Email: a.tsiogka@yahoo.com
Author 2 - Stamatios Gregoriou.
Author 3 - Alexander Stratigos.
Author 4 - Stergios Soulaidopoulos.
Author 5 - Natalia Rompoti.
Author 6 - Pantelis Panagakis.
Author 7 - Marina Papoutsaki.
Author 8 - Panagiotis Kostakis.
Author 9 - George Kontochristopoulos.
Author 10 - Konstantinos Tsioufis.
Author 11 - Anna Campanati.
Author 12 - Annamaria Offidani.
Author 13 - Charalambos Vlachopoulos.
Author 14 - Dimitrios Rigopoulos.